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(54) Title: HYDROCARBON SYNTHESIS PROCESS USING A HYDROCARBON SYNTHESIS CATALYST AND AN ACIDIC CATALYST

(57) Abstract: This invention relates to a hydrocarbon synthesis process comprising the conversion of a feed of H₂ and at least one carbon oxide to hydrocarbons containing at least 30% on a mass basis hydrocarbons with five or more carbon atoms. The conversion is carried out in the presence of an alkali-promoted iron hydrocarbon synthesis catalyst and an acidic catalyst suitable for converting hydrocarbons. The reaction mixture formed during the conversion contains less than 0.02 mol alkali per 100g iron and the H₂: carbon oxide molar ration in the feed of H₂ and carbon oxide is at least 2.

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